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Saving treatment time in direct posterior procedures.

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3M℠ Health Care Academy

Building up a posterior tooth's occlusal anatomy, cusp-by-cusp, can be a laborious and time-consuming task. To simplify this process, it is now possible to replace the numerous steps required with a single procedure using high-viscosity bulk fill materials. This has been successfully demonstrated with 3M Filtek One Bulk Fill Restorative, which offers easy sculptability and a great quality surface. Using this material, the patient's natural occlusal surface structure was restored by following StyleItaliano™'s the essential lines technique. A desirable optical integration was achieved, as well as significant treatment time savings for the practitioner due to the simplicity of the protocol.

Only two specific instruments and one bulk fill composite are required for this technique. Important material properties are easy sculptability and non-stickiness, as they enable the dental practitioner to remove the exact amount of material needed when modelling the surface and integrating the fissures. Due to the simplicity of the protocol and a reduction of the number of treatment steps made possible by an elimination of the need for layering or a cusp-by-cusp modelling, significant treatment time savings are achieved. The following case example is used to demonstrate the simplicity of the procedure. The material of choice was 3M™ Filtek™ One Bulk Fill Restorative, which offers the desired sculpting properties and a great surface quality.

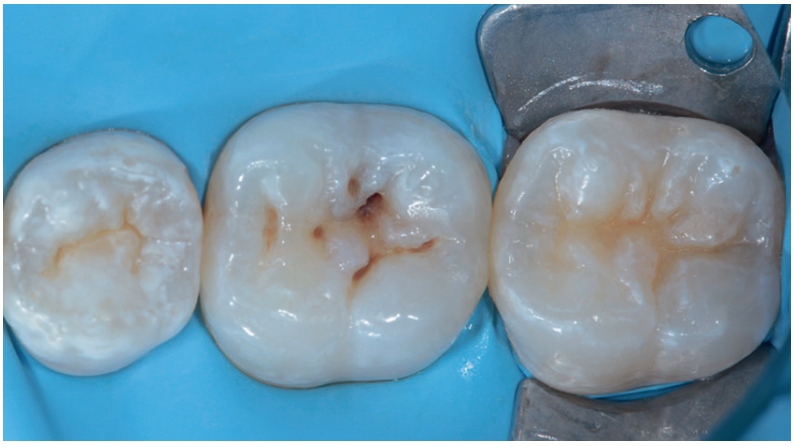


Figure 1: Initial situation with the maxillary first molar affected by caries.

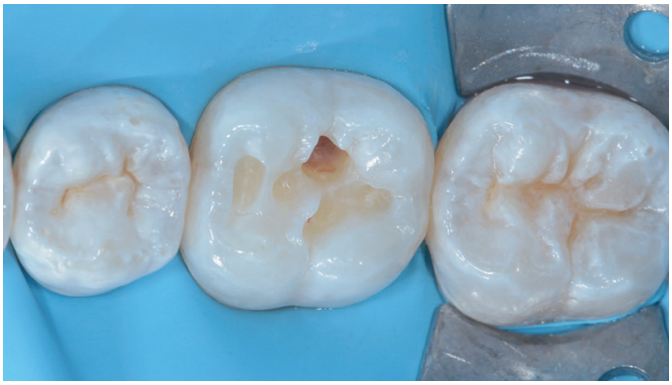


Figure 2: Cavity after caries excavation and preparation with only a small area with exposed dentine.

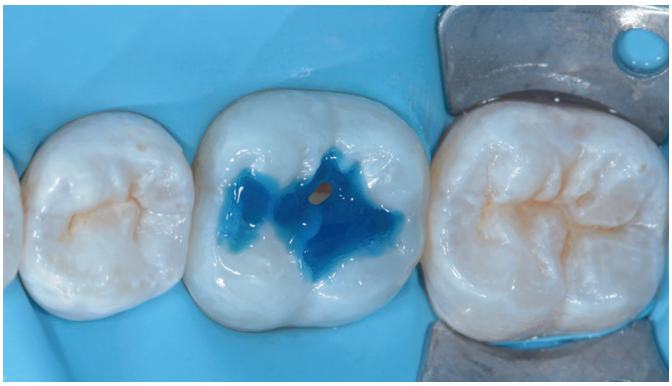


Figure 3: Selective enamel etching with 3M™ Scotchbond™ Universal Etchant for 15 seconds. Subsequently, 3M™ Scotchbond™ Universal Adhesive was applied to the tooth surface, rubbed in for 20 seconds and gently air dried to remove the solvents.

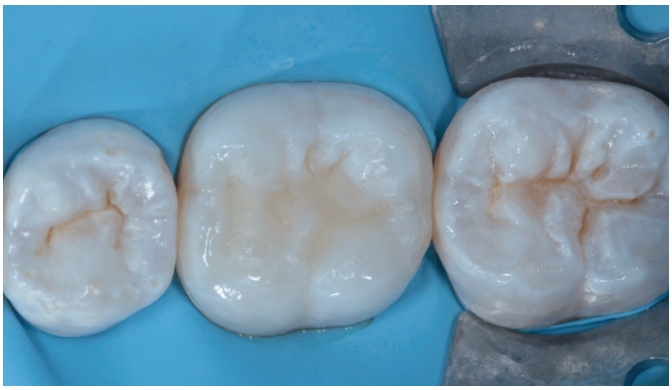


Figure 4: Situation after the application of 3M™ Filtek™ One Bulk Fill Restorative into the cavity in a single layer (the maximum layer thickness is 5 mm). The natural surface anatomy was imitated using the Condensa instrument (LM Arte), which was placed on the surface and rolled along the remaining cusps, thereby following their natural inclination. As it is not yet cured, the composite still appears slightly too translucent.

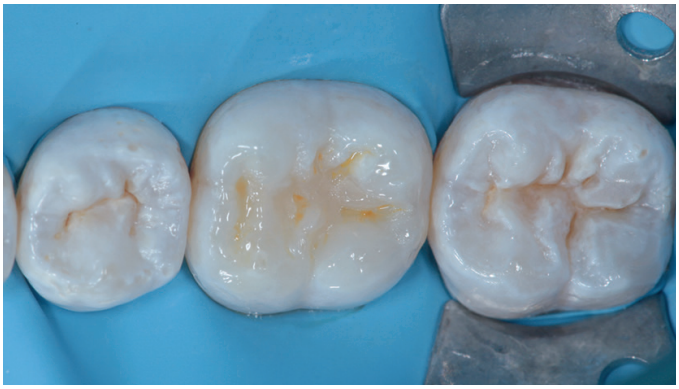
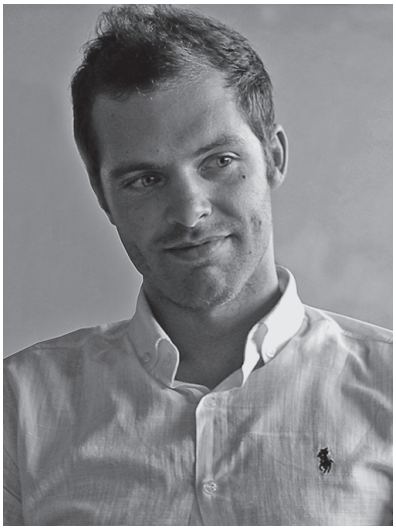


Figure 5: The essential lines identified by StyleItaliano for maxillary first molars drawn into the composite surface using the Fissura instrument (LM Arte). The best results are obtained if the instrument is not pulled through the material, but repeatedly dipped into it.

Figure 6: Checking the occlusal contacts after light-curing of the restored surface according the protocol recommended by the material manufacturer.

Figure 7: Treatment result with a natural appearance. The opacity of the bulk fill material has increased after curing and a great optical integration is obtained.



Tommaso Brunelli

Tommaso Brunelli graduated in Dentistry from the University of Brescia in October 2016. Since then, he has been working in different private practices in Bergamo and Brescia, with a focus on restorative dentistry and endodontics. In June 2018, he became the first prize winner of the OneAndOnlyBulkContest powered by StyleItaliano and 3M.

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